State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director
217/782-6760

2200 Churchill Road, Springfield, IL 62794-9276

Refer to: L0316510002/ Cook County
Wisconsin Steel Works/ S. Deering
Superfund/ Technical Report

April 15, 1994

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OVERNIGHT AIRBORNE EXPRESS

Mr. Richard P. Leonard
U.S. Army Corps of Engineers
Buffalo District
CENCB-PE-SM
1776 Niagara Street
Buffalo, N.Y. 14207-3199

Dear Richard:

Enclosed are comments regarding the Statement of Work (SOW) received on March 3, 1994. Also enclosed are pertinent documents referenced in the Agency's comments.

It is the understanding of this Agency that the SOW is to be utilized as a guideline and bidding mechanism to conduct contractual work with an environmental consulting firm in regards to the development and implementation of a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP), and a Health and Safety Plan (HSP) for Phase 2 of this project.

Since the disposition of this site, as it relates to a specific CERCLA or State remedial activity (ie. remedial investigation) is unclear, it is important to remember the relevance of the Agency's comments. IEPA is under a service agreement to conduct reviews on submitted documents and subsequent field activities as tasked by the Economic Development Agency (a federal branch of the Department of Commerce). Therefore, these review are not to be considered an approval or disapproval of proposed documentation and/or actions at this site.

On another subject, Navistar International Transportation Corporation has approached the Agency in connection with participation in investigations to be conducted at the site. Navistar has requested that they be allowed to submit comments on the Phase 2 proposed SOW. IEPA informed Navistar

that any organization or individual could supply comments on the Phase 2 SOW. The Agency received Navistar's comments on April 11, 1994. Due to the extensive nature of Navistar's comments and the diminutive time period for Agency review, Navistar's comments could not be evaluated for possible inclusion into the Agency's comments submitted this date. Navistar's comments are currently under review by the Agency and a request for the submittal of Navistar's comments to the Corps of Engineers has been performed by the Agency. Since Navistar's participation has not been clearly defined, regarding this phase of the investigation, it will be necessary to be discuss and determine Navistar's involvement in this project.

The Agency has been in contact with the USEPA on developments regarding Phase 2 activities involving the Wisconsin Steel Works site. IEPA has requested that USEPA and the Corps of Engineers conduct a meeting near the end of April to discuss the comments on the SOW. Dates of April 28 or 29, 1994 would be ideal for USEPA and IEPA to meet with the you to discuss this matter. If these dates are acceptable, please contact me at (217) 782-6760 for arrangements on a meeting location.

Sincerely,

Eric D. Runkel, Project Manager
Federal Sites Management Unit
Division of Remediation Management
Bureau of Land

enclosures: IEPA comments on SOW
Guidance on Investigation Derived Waste (IDWs)
IEPA's draft model Quality Assurance Project Plan (QAPP)
Illinois Groundwater Protection Act, Section 620

cc: Lora Ripley, USEPA, letter and comments only
Joe Ross, DOC, letter and comments only
Kathleen Styles, DOC-OGC, letter and comments only
Peter Orlinsky, IEPA, letter and comments only
Scott Siff, DOJ, letter and comments only

SECTION 2.0 TASK DESCRIPTIONS:

1. Page 2-1, Paragraph 4-- The decision to base background analysis for groundwater on one well nest located in the former parking lot (Fig. 2-1) may not provide appropriate information on groundwater quality for this particular area. Background groundwater analysis will require expansion. This should include additional wells be located in different areas upgradient in relation to this site. This part of the program must take into account groundwater flows, possible impacts on groundwater from surrounding industries and communities, what objectives will the results provide to the investigation, and how is the information is to be utilized for risk assessment considerations. Further development into background determinations will be necessary to ensure that proper delineation of contaminates found on-site as compared to background groundwater quality and possible influences of contaminates entering from off-site locations. This would also apply to background evaluation for soils (Also refer to Task 4).

2. Page 2-1, Paragraph 5-- The discussion on deep wells to the "top of rock" should be referred to as bedrock. This would alleviate confusion over the intent of the investigation. This should be changed throughout the text to eliminate any confusion or be explicitly understood by the retained Contractor as to the intent of the deep well program during Phase 2 activities.

   Also, in this paragraph (and in Figure 2-2) there is discussion on "telescopic well design". It is unclear if this is a proven technology for the mitigation of contamination into stratigraphically dissimilar formations and/or aquifers. Additional information will be required on this drilling method to ensure that it provides the most protective and technically feasible procedure by which to proceed with sampling into the bedrock.

3. Page 2-1, Paragraph 6-- The discussion on "cuttings" will need to be clarified for Phase 2 activities. The handling of investigative derived waste (IDW) should be explicitly understood as to the disposition of IDW during Phase 2 activities. Guidance on IDW has been included for your review and comments. This has been a problem at other sites, therefore this subject should be addressed early in the developmental stage of the Field Sampling Plan (FSP).

4. Table 2-1, Page 2-2-- The table is incorrectly referred to as "Phase III". Please correct the discrepancy. Also, the approximate depths should be included in this table or within the FSP to be prepared by the retained Contractor.

5. Figure 2-1a and 2-1b-- These figures appear to include proposed shallow well locations as denoted by the symbol for "proposed deep well locations". This should be corrected to include denotations for the areas inclusive of proposed shallow well locations.

   Also, MW-31A and MW31B locations may not be appropriate for investigation of the Coke Plant Area. MW-31A and MW31B should be proposed for an area closer to the Calumet River to investigate possible contamination migration downgradient from MW-19.

In addition, the proposed well locations for MW27A and MW27B should be relocated closer to the east boundary line of the Slag Area to investigate the possible migration of contaminates from this area into off-site locations.

6. Task 1, Page 2-8, Paragraph 1-- The criteria for selection of soil samples proposed for deep wells should include a contingency. The contingency should be used in the event the selected criteria cannot be met by the proposed methods. This should probably include a pre-selected depth by which a sample will be taken in the event visual or instrumental readings do not give conclusive evidence of contamination. This should also apply to the following paragraph concerning shallow well samples.

7. Task 1, Page 2-8, Paragraph 3-- Additional Shelby tube samples should be taken at different locations throughout the site (on and off-site) to properly characterize the permeability of the suspected clay area(s). Shelby tube evaluation should include a grain size analysis along with permeability tests.

8. Task 2, Page 2-8, Paragraph 1-- The guidance (referenced in Table 2-2) for the determination of Non-Aqueous Phase Liquids (NAPL) does not apply comprehensively to LNAPL. DNAPLs and LNAPLs will exhibit many different characteristics in comparable hydrogeological conditions. The guidance provided (pertaining to DNAPLs) will need to be scrutinized as to what indicators apply to LNAPL properties and what dissimilar characteristics (unique to LNAPLs) will need to be determined by other methods. Also, it is unclear if this section refers to determining the possibility of NAPL(s) existence prior to Phase 2 sampling based on information derived in Phase 1. It would be improbable to determine if NAPL contamination exists in wells that have not been installed (ie. the 18 additional wells).

   It may not be beneficial to draw samples from a static well since many factors may have influenced the contaminates in any one well and thus provide erroneous information. The information provided on samples drawn from a static well will require strict scrutiny as to applicable relationships concerning groundwater conditions at this site. Proper development of existing and projected monitoring wells is probably the preferred sampling procedure in determining tangible contaminate concentrations. Also, the statement concerning other parameters (ie. PAH's, Cyanide, Phenol, Ammonia-N, and metals, etc.) is not made clear, in the text, as to what sampling event (eg. before purging or in the bulk water analyses) will be retrieved for analyses.

   It is important to remember that "NAPL" is a term used to denote the dominate "state" by which a contaminate or contaminates is/are believe to exist at that particular location. There are distinct and relevant criteria for the determination of NAPLs as they relate to a specific medium (ie. groundwater or soils) as well as differences in NAPL behavior in comparison to locations within subsurface geology (eg. unsaturated, vadose, and saturated zones). All of these factors must be taken into consideration when examining the potential existence of contamination in a NAPL state.

9. Task 2, Page 2-8, Paragraph 2-- It will be necessary to measure groundwater recovery after well development to provide information on recharge rates. This should be outlined in the SOW or the FSP. It should be proposed that a predetermined time interval between well development and sampling be established for field activities.

   Also, this section outlines the use of one bailer for all groundwater samples. It would be more beneficial to use a dedicated bailer for each well to ensure that no cross-contamination occurs. It is not clear, from the text, how the bailer would be decontaminated between samples. Please make the appropriate reference to decontamination procedures or outline the procedure in the SOW. However, it is still recommended that a dedicated bailer be utilized for each well and that proper decontamination procedures are followed after each sample is taken from each well to ensure an accurate representation of contamination for all wells.

10. Table 2-3, Page 2-9-- Please define what "MRD" refers under the heading "No. of Field Samples"

11. Task 2, Page 2-11, Paragraph 2-- Please define "N.T.U." in the Glossary or this section of the text.

12. Task 2, Page 2-11, Paragraph 5-- The evaluation of "well to dryness", as referred in this section, is unclear. There is no summary on how this determination will be completed. Please clarify the text. Also, there are multiple grammatical errors in this paragraph.

    Proper well development and related sampling appears to be of great concern throughout the text for the Phase 2 investigation. Proper sampling procedures will require explicit clarification to ensure that an accurate representation of contamination can be achieved for this site. This concern will require additional examination.

13. Task 3, Page 2-11, Paragraph 1-- There is a reference to a summary of "hot spots" in this section, however there is no summary. There is a reference to Figure 2-3, but this information only pertains to the postulated locations of "hot spots" and not a summary. Please provide the information in this section or make the appropriate reference (appears to be Table 2-7) to where this summary may be found in this text.

14. Task 3, Page 2-11, Paragraph 4-- The reference to no QA/QC requirements on field screening activities concerning "hot spots" is inappropriate. It is important to conducted QA/QC on field screening data to ensure an accurate depiction of "boundary" areas and instrument results. Because the Data Quality Objective (DQO) of field screening results are so diminutive (Level II), it is of the utmost importance to ensure that these samples are not providing erroneous information. This is especially true since it appears that field screening results will be the driving factor in decisions on confirmatory samples and the placement of additional sampling locations. Because of the nature of field screening activities there is an equal (if not greater) possibility for cross-contamination of equipment and/or samples than with Level IV data acquisition. Therefore a QA/QC program should be tasked to the Contractor for inclusion in the FSP to ensure Phase

2 field screening data is considered valid. This is not to say provide QA/QC samples on field screening results be conducted at a DQO of Level IV (the confirmatory samples will provide this level), but IEPA recommends that a cross reference program be implemented to provide QA/QC on field instrumentation and screening results. This program can be completed in various manners and should be discussed for development in the FSP.

15. Task 4, Page, 2-12, Paragraph 2-- The discussion on boreholes being "refilled" will require additional evaluation. Proper abandonment of the proposed boreholes will require that specific guidelines be outlined in the FSP on procedures to conduct this activity. This requirement also relates to field activities on-site. Also, it appears that this entire task is duplicated on page 2-21.

16. Task 5, Page 2-12-- There should be a reference for modifications to be incorporated into the HSP concerning this activity. This task may pose unforeseen problems associated with both sampling protocol and personnel safety. This task should be completely evaluated prior to implementation, so that no delays will be encountered in field activities.

17. There is no page 2-22 in this document.

18. Task 6, Page 2-26, Paragraph 4-- As in Task 1, there should be a contingency to include samples for laboratory analyses in the event that visual or instrumental readings are inconclusive.

19. Task 7, Page 2-26 -- What is the justification on doing TCLP for metals only in the Slag area? What justification is there for doing 6 total TCLP in the Slag area? Is this representative of the Slag area? What is the justification for using a composite sample for all the proposed TCLP analyses? What is the purpose of TCLP analysis in this Phase of the project? What will the information be used for? Why were these areas selected? Why were other area excluded from TCLP analyses. Are additional TCLP analyses in these area (or other areas) anticipated at a later date? For samples (other than the Slag area) why were the parameters chosen as referenced in Table 2-13. Also, Table 2-13 does not provide units by which concentrations are measured.

    TCLP analyses is used to derive many ARAR's at various sites in Illinois. TCLP analyses is also required on removal actions involving RCRA hazardous waste. If material is anticipated to be remediated or manipulated in a manner requiring TCLP analyses, this phase of the project could conceivably satisfy TCLP requirements. Further evaluation into the requirements regarding TCLP analyses should be examined.

20. Figure 2-6b-- It is unclear how this figure pertains to the SOW. It is not referenced in the text.

21. Task 8, Page 2-32-- It is difficult to follow the intent of the proposed "pumping tests" as outlined in the SOW. In theory, this task may provide additional information on hydraulic properties of the Carmi sands by examining drawdown effects. However, the approach presented in the SOW is ambiguous in defining specific objectives of the pumping tests, by what methods and assumptions will the test will be performed and how will the information be interpreted, given what is and is not know about hydrogeological conditions at this site.

    Another factor (not considered in this proposal) is the possible influences on contaminates by the pumping affects of this test. Indiscriminate pumping may manipulate chemicals into areas not previously contaminated or unduly cause a temporary flux in contaminate concentrations at wells located within the proximity of the pumping tests. Also, the requirements necessary to meet applicable regulations for discharge of groundwater from an area known to contain contaminates may not be technically feasible at this time. Further evaluation of this proposal will be required regarding this task of the Phase 2 proposal.

SECTION 3.0- SAMPLING

22. Subsection 3.5, CE 301-399 (organic), Page 3-10-- The proposal to identify VOA samples with only one tag may be inappropriate. VOA samples should be tagged individual to ensure that if a vial is damaged during handling or shipping, analyses on all the affiliated vials will not be comprised.

23. Figure 3-6, Page 3-12-- The reference to samples being sealed in metal paint cans for shipment may be inappropriate. A more suitable packaging device may be necessary to ensure compliance with current shipping requirements. Also refer to Figure 3-8.

24. Figure 3-8, Page 3-16-- Shipping requirements will need to be reviewed to ensure that the shipping company transporting samples is given the appropriate information on material being shipped. Many shipping companies today require specific information on the material being transported by them and subsequently require special handling guidelines for particular materials to ensure their worker's safety. This must be taken into consideration during FSP development to circumvent any delays during field activities.

SECTION 5.0- QUALITY ASSURANCE PROJECT PLAN

25. A copy of the draft Quality Assurance Project Plan (QAPP) currently being utilized by the Pre-Notice program at IEPA has been included for review and comments on the applicability of in the proposed FSP. If a copy of the USEPA QAPP guidance is needed please let the Agency know and a copy will be provided to you.

SECTION 7.0 SCHEDULES AND REPORTING REQUIREMENTS

26. Page 7-1, Paragraph 2-- It appears that the schedule outlines a date of 21 days to review the SOW, compile draft documents of the FSP, QAPP, HSP and submit them for comments to the Corps of Engineers. This date may not allow for an appropriate response from the contractor. If this SOW is to be supplied to the contractor in an suitable amount of time, prior to the notice to proceed, then this schedule may be applicable. However, it is not clear by the text if the contractor will have a sufficient period by which to review the SOW.

    Also, it is unclear as to what review schedule the submitted draft FSP, QAPP, and HSP will be subjected. It is important to have an acceptable amount of time for review, revisions, submittal and resubmittal of documentation, to assure an amicable progression of events.

GENERAL COMMENTS

27. There is a concern over classification for groundwater at this site. It has been expressed by the Corps of Engineers that this site is to be considered Class II groundwater. It is unclear how this was determined. It is important to remember that groundwater classification, as it pertains to Illinois Groundwater Protection Act, is govern by the yield of the system and not by groundwater quality. If the appropriate reference could be supplied as to what information was utilized to determine Class II categorization, it would be appreciated. A copy of the IGPA, Section 620 regulations has been included for your review.

28. It is difficult to follow the text and the corresponding figures and tables within the text. It may be necessary to place all figures and tables in separate sections. Also, on some of the figures it is nearly impossible to interpret approximate locations outlining the proximally for additional work. The figures should be elucidated, so that the contractor will have a more definitive interpretation on the intent of the SOW figures.

29. Page 7-3 provides a list of references utilized in the creation of the SOW. It also appears that reproductions were extracted from the reference documents and only the page, figure, drawing, and table numbers changed to comply with the SOW. It is very unusual for the Agency to receive a document with such a diminutive amount of original work completed by the author. It is the Agency's understanding that this document is to be utilized as a guideline and bidding mechanism for contractors to submit a FSP, QAPP, and HSP. It may be advantages to simply reference the material and supply text on how the Corp of Engineers requires the material be utilized in the contractor's draft documents. Most environmental have or have access to all the referenced material. It is more important to have the contractor understand how and why the material is be incorporated into the FSP, QAPP, or HSP.